Assessing User Preferences for eReaders and Tablets

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ABSTRACT. Librarians purchased twelve ereaders and six tablets to provide patrons the opportunity to experiment with the latest mobile technologies. After several *train the trainer* sessions, librarians shared device information with the broader health sciences community. Devices were cataloged and made available for two-week checkout. A limited number of books and apps were pre-loaded for all the devices and patrons were allowed to download their own content. Each tablet has Google Books, iBooks, Kindle, and Nook apps available to allow choice in reading ebooks. Upon return, patrons were asked to complete a ten question survey to determine preferences for device use.

KEYWORDS: Mobile technology, ereaders, tablets, iPad, Xoom, Kindle, Nook, pilot program, user preference survey

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INTRODUCTION

In response to the rise of ereader and tablet technologies, academic health sciences libraries are exploring the use of mobile devices to support education.[1] While these tools have advantages related to "portability and searchabilty" and disadvantages related to "connection speed, navigation, and display," [2] the surge in the use of mobile technology is explosive. [3]

Previous success in teaching with Palm and iPod Touch devices [4] led faculty at the Spencer S. Eccles Health Sciences Library to examine the use of ereader and tablet technologies. Librarians made the decision to purchase devices for checkout and assess user preferences upon return of the device. This assessment provided librarians with the information needed to determine which devices users preferred and which features were most valued. The library's ereader/tablet pilot program provided faculty, staff and students the option to "try before buying" and led to opportunities for integrating iPads into health sciences curriculum.

SETTING

The Eccles Library serves as the primary resource library for the University of Utah's Health Sciences, which includes the School of Medicine and the Colleges of Health, Nursing, and Pharmacy, the Biomedical Informatics community and the University's hospitals and clinics. Library faculty are nationally renowned for their ability to creatively apply technologies to library services, education and research support. As the major academic health sciences library in

the state, Eccles Library supports the health information requests of health care providers, citizens of the state, faculty, staff and students from 14 academic institutions. The University of Utah student enrollment for autumn 2011 was 31,660 and includes undergraduate and graduate students.

The Eccles Library staff supports innovative information programs including advanced virtual services, comprehensive digital collections, and a dynamic and curriculum-integrated educational program. Library staff have created multiple information subject portals and educational web-based instructional programs. In support of interprofessional education, the Library director has led the IPE initiative on the health sciences campus. The Library houses and provides support to administrators of the University's Clinical and Translational Science Award (CTSA) center and a Biomedical Innovation Center. In addition, the Library serves as the MidContinental Region and National Library of Medicine Training Center for the National Network of Libraries of Medicine.

METHODS

Device Selection

In September 2011, the Information Technology librarian selected and purchased six tablets and twelve ereaders for patron check-out.

- 3 Apple iPad 2 tablets
- 3 Motorola Xoom tablets
- 6 Amazon Kindles
- 3 Barnes and Noble black and white Nooks

- 3 Barnes and Noble color Nooks

These specific products were chosen because at the time of purchase they were popular with the public and were highly rated in the technology literature.

To encourage experimentation, the devices were preloaded with various readings, tools and apps. Each tablet included the ebook reader for the Kindle, Nook, Google Books; the iPads also included iBooks and Inkling. This allowed users to compare and contrast ereader features and services. At least one academic and one popular ebook was purchased per device (e.g. *Medical Surgical Nursing Demystified* and *Cutting for Stone*). Users were invited to add additional books, magazines, apps and tools.

Over the eight month pilot program, sixty-nine people checked out the various devices for a two-week period. Upon return of the device, users were asked to complete a ten question survey. Results from the survey were evaluated to determine user preferences in order to facilitate purchasing and collection development decisions. The survey results are discussed in detail later in this article.

Train the Trainer

A train the trainer series was developed and implemented by the pilot program's core team leaders. These four individuals volunteered to become the expert on one of the devices, starting with the tutorial provided by the manufacturer. Use of the tutorial reduced the learning curve and ensured a thorough examination of the product. Deadlines and dates were established for sharing back the information learned about the devices with other team members. The device expert then instructed library colleagues about the unique features of the tool. In this way, library

faculty and staff became experts and were able to assist library patrons and answer device specific questions.

Informing and Training Users

The pilot program was introduced to the health sciences community during the September 2011 monthly Library and Information Technology Forum. The LIFT Forum, *Hot Mobile Devices: Tablets and eReaders* < http://library.med.utah.edu/or/lift/pastlift.php>, focused on the utility of the four devices. Each presenter detailed device features, the physical geography of the device, home screen basics, and how to download and read a book. At the conclusion of the forum, audience members were invited to "test drive" a device. Besides being well attended, the forum generated immediate response and interest in device checkout. Other promotional activities included an article in the Library newsletter, a Library blog post, posting flyers in the Eccles Health Sciences Education Building, word of mouth and the University of Utah student newspaper. [5]

Anticipating that users might need help, a *Getting Started Guide* was developed for each device to provide at checkout. This guide covers the basics of turning the device on and off, how to connect to WiFi and how to navigate the buttons and special features. As a supplement to the written guide, an online *Research Guide* < http://campusguides.lib.utah.edu/EcclesMobileDevices > was created for the devices. The Mobile Devices -Tablets and eReaders research guide provides a program summary, links to the online tutorials, the getting starting guide in PDF, and a review of basic device information.

Survey Creation and IRB Approval

Two individuals led the survey creation effort to develop the initial list of questions. The survey was designed to be short and concise — not more than ten questions – to get to the essence of the research question. These draft questions were shared with all team members, who provided feedback, edits, suggestions, and critique. As a result of this process, the ten questions were refined and tested before being submitted to the Institutional Review Board (IRB), which granted an exemption.

After receiving an IRB exemption, the survey questions were entered into an online questionnaire tool (SurveyMonkey-URL) that allows for easy creation, distribution and analysis of survey results. Patrons who checked out a device were directed to the survey when they returned the ereader/tablet. Survey respondents were assured that their answers were anonymous and that no personal data was being collected.

Checkout Policies and Loan Agreement

Patrons were asked to sign a *Loan Agreement* at the time of checkout. The agreement advised the user that they accepted full responsibility for the device. Users were informed of the replacement cost for the device, cover, adapter and cables and that they were expected to comply with the University of Utah *Information Resources Policy <http://www.regulations.utah.edu/it/4-002.html >*. The Loan Agreement included a statement requesting that they complete the ten minute survey at the time the device was returned.

The twelve devices were cataloged in the online circulation system (Aleph) and given a property sticker and identifying barcode. Devices were checked out for a two week period to a University of Utah affiliate with a valid University ID card. If there was no waiting list, the item could be renewed for an additional two weeks.

Upon check in, the devices were restored to factory settings; the Kindle and Nook were restored using a generic library account. The Xoom was restored from scratch and the iPad had a master image on iTunes that facilitated the restoration.

SURVEY RESULTS

Question 1: Demographics: tell us who you are

During the pilot program period (September 2011 to April 2012), the total number of device checkouts was 69 and the total number of surveys completed was 39, for a return rate of 56%. In order to boost the return rate, two email reminders (in November and March) were sent to patrons who had signed the Loan Agreement.

The iPad and Xoom tablets were checked out more often than the ereaders: 39 tablets to 30 ereaders. See Table 1.

Table 1. Devices, total number checked out, total number of surveys completed and the cost of each device available in the pilot program.

Device	Total checked out	Total survey responses	Cost of devices
iPad	20	14	$599
Kindle	16	8	$139
Nook black & white	2	0	$149
Nook color	12	4	$249
Xoom	19	13	$589

Based on the 39 returned surveys, students (8) and faculty (7) from the School of Medicine were the top users of the devices, with a smaller number of students (6) from the College of Nursing, followed by College of Pharmacy faculty (5).

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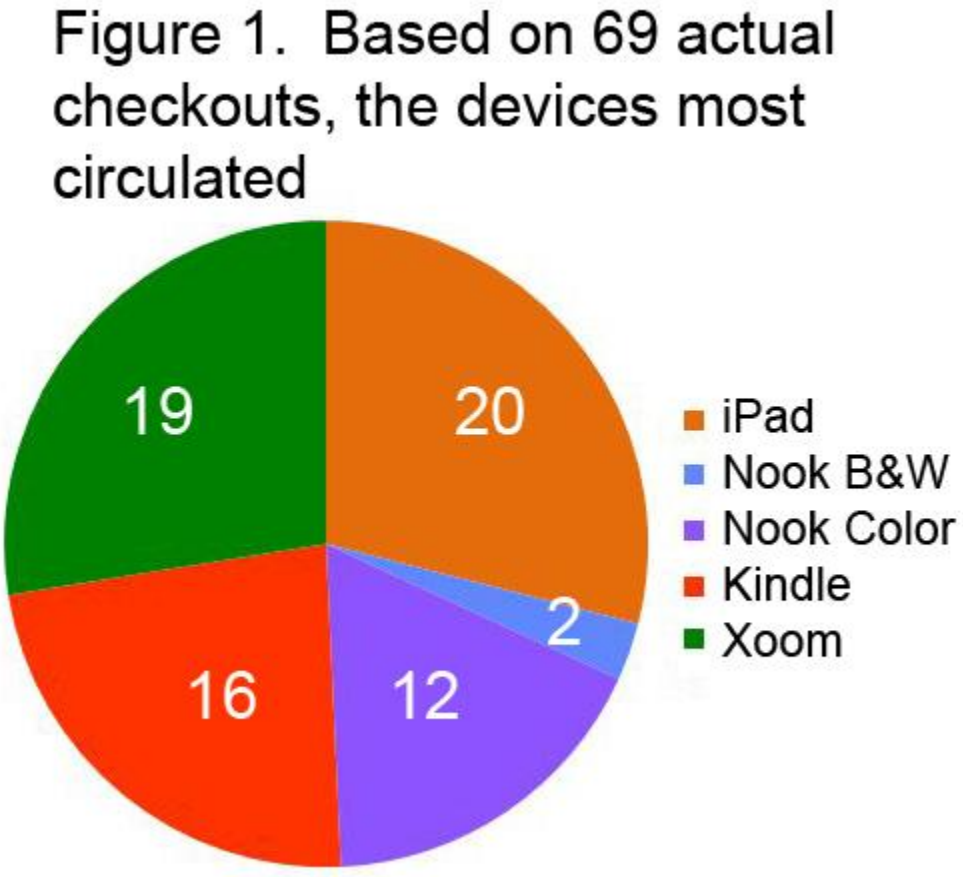
Question 2: Which device did you checkout?

Based on the 39 returned surveys, the iPad (14) and Xoom (13) were the devices most frequently checked out, followed by the Kindle (8), the Nook color (4) and Nook black and white (0).

Based on 69 actual checkouts, the devices most circulated were the iPad (20) and Xoom (19), followed by the Kindle (16), the Nook color (12) and Nook black and white (2). See Figure 1.

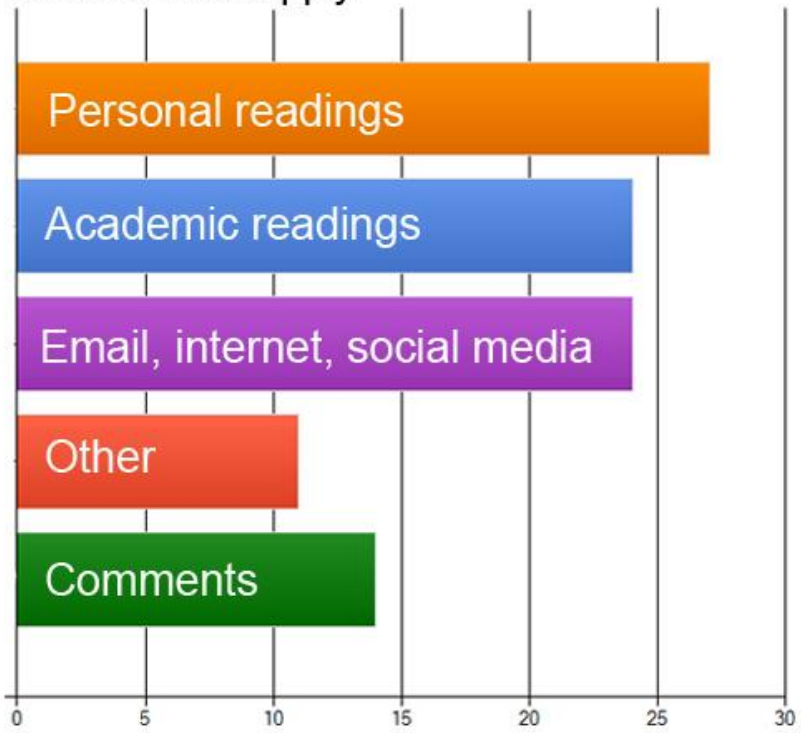


The iPad had a long wait list while the Xoom had a shorter wait list and the ereaders had no wait list. Based on the numbers, the color Nook was preferred to the black and white, but in general, the Kindle was preferred to the Nook.

Question 3: How did you use the device you checked out?

Devices were used for personal and academic reading, with strong interest in using the devices to access email, the Internet and social media. Comments about use ranged from listening to music, viewing video, using Dragon dictation, taking notes, and reading magazines, newspapers and books. See Figure 2.

Figure 2. How did you use the device? Check all that apply.



Question 4: Did you use the device to highlight, annotate or bookmark content?

Most users did not try the highlight, annotate or bookmark features; 31 (79%) said NO and 8 (21%) said YES. This user's statement sums up the reason for not using annotation: *"If I had had the Nook for longer, or if it were my personal device, I would use this feature often, I think. I was just browsing most reading materials during the two week check out period, so I didn't take the time to make them my own."*

Question 5: Did you purchase or download materials for the ereader or tablet?

Twenty-two (56%) of the 39 respondents said they did not make any purchases. Based on comments, this was due to time constraints and the limited ability to *"make the device my own."* One user stated *"I purchased a B&N membership for $25, which enabled me to receive free two-week trial subscriptions to many newspapers and magazines. However I did not purchase any books or other materials in addition to the membership."*

Question 6: What did you like best about the device you checked out?

Summarizing respondent answers, the features best liked included the following:

- Easy to use and navigate
- Portable
- Battery life
- Clarity of screen
- Touch sensitive
- Ability to read PDFs

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- Camera
- Video capability

Question 7: What did you like least about the device you checked out?

Summarizing respondent answers, the features least liked included the following:

- Felt unable to customize; wasn't mine
- Button locations
- Typing on it
- Poor web browser
- No flash drive
- No Microsoft software
- Slow processing

Question 8: Based on this experience, would you consider purchasing a device?

Twenty-six respondents indicated that they would purchase an iPad, while six indicated they would purchase a Xoom. eReaders were less popular, with five stating they would purchase a Kindle and four choosing a color Nook. Only one respondent indicated that they would not purchase a device. Some comments: *"I got a Kindle based on my experience."* Another *"I already own a Kindle which I use a lot. Still not sure if I want to invest in iPad or tablet although I did like it a little more than I thought I would."* See Figure 3.

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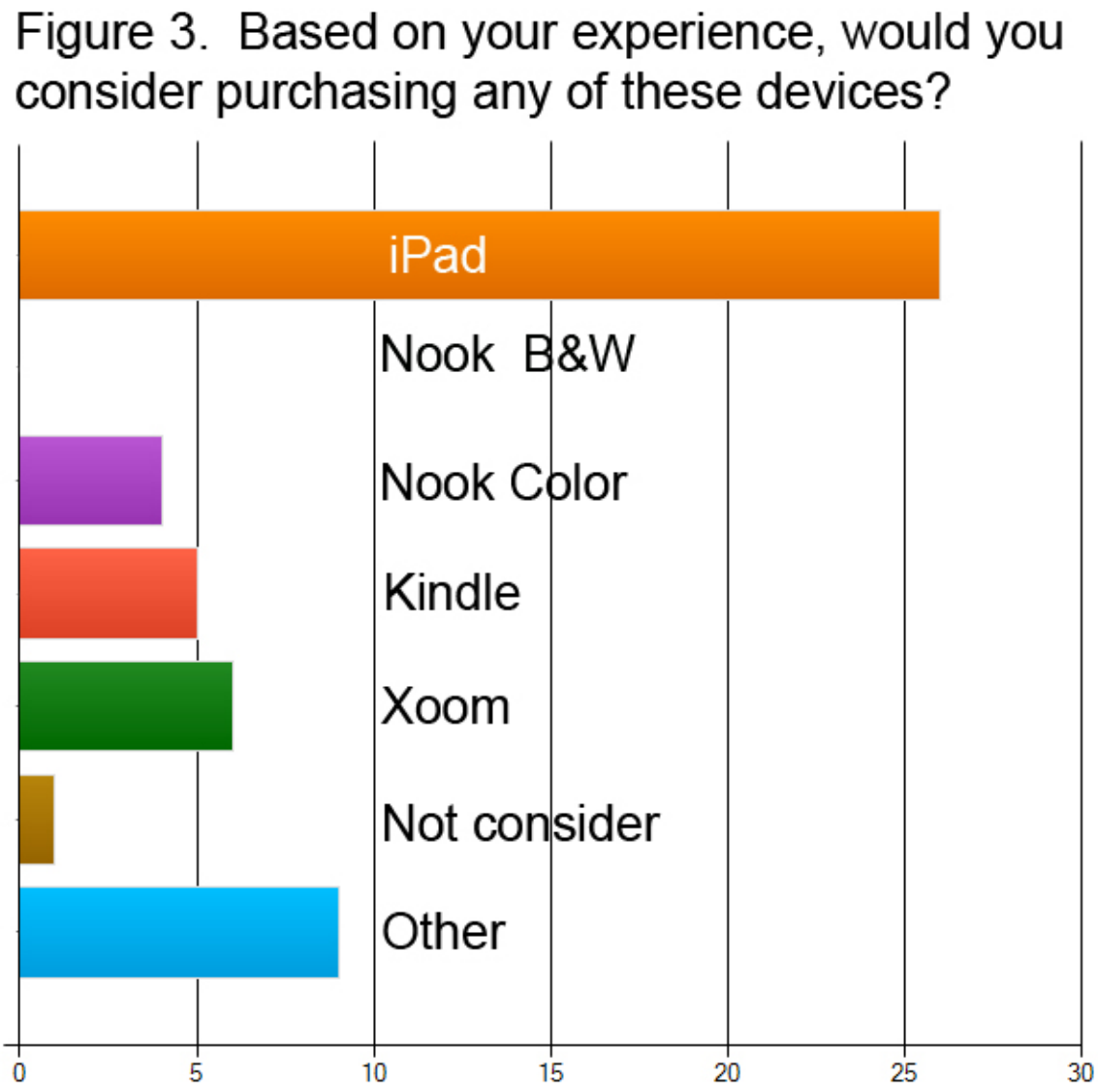

Question 9: What specific apps would you recommend?

Survey respondents had a range of apps that they use and would recommend.

- Dropbox, SugarSync (file storage and syncing)
- Epocrates, Lexicomp, Micromedex (drug resources)
- Evernote, iAnnotate, Notability (note taking tools)
- Mendeley (bibliographic management/social media)
- OnLive Desktop, LogMeIn (virtual and remote desktop)

- Weather channel, Amazon Music, Netflix (entertainment)

Question 10: Did the use of the device meet your expectations?

A significant number of survey respondents, 31 out of 38, indicated that the use of the device met their expectations. Many of the comments illustrated the limitations of the devices. For example: *"It was unable to open Microsoft office documents."* Another comment: *"Yes and no. There were things that surprised me that I didn't think it was capable of doing. However, something's that I expected it to do-it wasn't able to."* And *"I didn't use it, because I didn't think I had the time to set it up and become oriented to it."*

DISCUSSION

Eccles Library patrons appreciated the opportunity to check out various tablet and ereader devices on a two-week trial basis. This provided patrons the option to evaluate the device before purchasing. Librarians decided that the two-week checkout period offered patrons adequate time to fully explore the device.

Survey results showed that a relatively equal number of faculty and students checked out the devices. This illustrates that both teachers and learners are interested in exploring the utility of mobile devices and used them for more than educational purposes. Engaging in social media, listening to music, surfing the web, and reading news and literature were all cited as popular uses. Librarians expected the tablets to be more popular due to their expanded functionality, so it was interesting to note that, while tablets had slightly more checkouts, the ereaders had significant circulation.

The survey responses clarified the concept that tablets and ereaders are designed to be highly personal devices with which individuals work, socialize and recreate. Respondents felt constrained in customizing tablets that belonged to the library. Few users highlighted, annotated, or bookmarked content on the ereaders, perhaps for the same reason. On the other hand, all but one of the respondents indicated an interest in purchasing a device. Users perceived that ownership of the device is important to fully take advantage of the features. Librarians believe that more education might overcome this perception.

The majority of survey respondents indicated that the device met their expectations. Library patrons did experiment with the pre-loaded books and apps on the devices, thus expanding their knowledge of what is available in the world of medical apps. Based on survey results, the Eccles Library plans to continue the program with new and different devices, and address the "make it my own" limitation with the devices.

CONCLUSIONS

The responses from the survey were positive and informative; librarians viewed the pilot project as a success. Patrons enjoyed using the various ereaders and tablets and it is clear that this mobile technology is blurring the context between work and play.

Based on the success of this pilot, the Education and Information Technology Librarians proposed upgrading the technology in an existing School of Medicine third year clinical rotation. The pediatric rotation has been checking out iPods for use in clinical settings. The popularity of the iPad and the additional functionality of the device led to an evolution in the course to an iPad platform.

There are now plans to continue the program with an expanded selection of devices. New iPads, the Nexus Google tablet, and the latest ereaders will be added to the inventory. The patrons clearly liked to test the products and the Eccles Library makes it a goal to help patrons keep up with the latest technology. By experimenting first, faculty and students can make informed decisions about the device they purchase and about which devices are best suited to meet their needs.

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